

### SM3H 8.1 Fundamental Identities (key-odds) 2017-18

Must show all work when simplifying! These are final answers only!

1. even

3. odd

5.  $\csc x$

7.  $\cos^2 \alpha$

9.  $2\sin \alpha$

11.  $\cot \alpha = 2$ ,  $\sin \alpha = \sqrt{5}/5$ ,  $\csc \alpha = \sqrt{5}$ ,  $\cos \alpha = 2\sqrt{5}/5$ ,  $\sec \alpha = \sqrt{5}/2$

13.  $\sec \alpha = -5\sqrt{3}/3$ ,  $\sin \alpha = -\sqrt{22}/5$ ,  $\csc \alpha = -5\sqrt{22}/22$ ,  $\tan \alpha = \sqrt{66}/3$ ,  $\cot \alpha = \sqrt{66}/22$

15.  $\cos x$

17.  $\cos^2 x$

19.  $-\tan^2 x$

21.  $\csc x$

23.  $325^\circ$

25.  $\frac{3\pi}{2} \text{ ft}^2$

27. Amp: 3, phase shift: right  $\pi/2$ , period:  $2\pi/5$ , freq:  $5/2\pi$ , range:  $[4, 10]$